

REMARKS

The Official Action mailed February 16, 2006, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Accordingly, the Applicant respectfully submits that this response is being timely filed.

The Applicant notes with appreciation the consideration of the Information Disclosure Statements filed on April 20, 2004; and July 21, 2005.

Claims 1-48 are pending in the present application, of which claims 1, 5, 9, 13, 17, 23, 29, 37 and 43 are independent. Claims 1, 5-9, 13, 17, 23, 29, 37 and 43-45 have been amended to better recite the features of the present invention. The Applicant notes with appreciation the indication of the allowability of claims 9-12 and 23-28 (page 9, Paper No. 0106). For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

The Official Action objects to claims 1, 5, 9, 13, 17, 23, 29, 37, 43 and 45 for minor typographical and grammatical informalities. In response, the Applicant has amended the above-referenced claims in accordance with the Examiner's detailed suggestions. Reconsideration and withdrawal of the objections are requested.

The Official Action objects to the specification under 37 CFR § 1.75(d)(1) and MPEP § 608.01(o) "as failing to provide proper antecedent basis for claim 43," asserts that "[it] is not clear where the specification describes a single optical waveguide operating on both the major and minor axes of the beam spots" and suggests that the Applicant "either point out where the specification supports claim 43, amend the specification to provide such support without introducing new matter, or amend claim 43 to be consistent with the original specification" (page 3, Paper No. 0106). In response, claim 43 has been amended. Specifically, claim 43 has been amended to recite that a laser beam is shaped into linear shape through an optical system comprising first and second cylindrical lenses, a first optical waveguide and a second optical waveguide, that a first optical waveguide acts upon the linear beam spot in the direction of its major

axis, that a second optical waveguide acts upon the linear beam spot in the direction of its minor axis, and that the laser beam is incident into a curved surface of the first cylindrical lens, the first optical waveguide, and a curved surface of the second cylindrical lens in this order. The features of claim 43 are fully supported by the present specification. Reconsideration of the objection is requested.

The Official Action rejects claims 1, 5, 13, 17, 19, 29, 31, 43 and 45 as anticipated by JP 8-338962 to Obara; claims 1, 2, 5, 6, 17 and 18 as anticipated by U.S. Patent No. 5,303,084 to Pflibsen; and claims 1, 2, 5, 6, 17-20 and 37-40 as anticipated by U.S. Patent No. 6,437,384 to Okamoto. The Official Action rejects claims 2-4, 6-8, 14-16, 18, 20-22, 30, 32-36, 44 and 46-48 as obvious based on Obara; and claims 3, 4, 7, 8, 21, 22, 41 and 42 as obvious based on Okamoto. The Applicant respectfully submits that an anticipation rejection or a *prima facie* case of obviousness cannot be maintained against the independent claims of the present application, as amended.

As stated in MPEP § 2131, to establish an anticipation rejection, each and every element as set forth in the claim must be described either expressly or inherently in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of

one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art.” In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Independent claim 1 has been amended to recite first and second cylindrical lenses, where an optical waveguide is provided between the first and second cylindrical lenses, and where a laser beam is incident into a curved surface of the first cylindrical lens and one edge portion of an optical waveguide and emitted from the other edge portion of the optical waveguide and a curved surface of the second cylindrical lens.

Independent claim 5 has been amended to recite first and second cylindrical lenses for expanding and projecting a plane having homogeneous energy distribution formed by an optical waveguide to an irradiated surface, where the first and second cylindrical lenses have first surfaces opposed to each other, the first surface of the first cylindrical lens is concave to the first surface of the second cylindrical lens and the first surface of the second cylindrical lens is convex to the first surface of the first cylindrical lens.

Independent claims 13 and 29 have been amended to recite first and second cylindrical lenses, where an optical waveguide of a first optical system is provided between the first and second cylindrical lenses, and where a laser beam is incident into a curved surface of the first cylindrical lens and one edge portion of the optical waveguide and emitted from the other edge portion of the optical waveguide and a curved surface of the second cylindrical lens.

Independent claim 17 has been amended to recite that a beam homogenizer comprises an optical waveguide including a pair of reflection planes provided oppositely and first and second cylindrical lenses, and where a laser beam is incident into a curved surface of the first cylindrical lens and one edge portion of the optical waveguide and

emitted from the other edge portion of the optical waveguide and a curved surface of the second cylindrical lens.

Independent claim 37 has been amended to recite that a laser beam is shaped into linear shape through an optical system having first and second cylindrical lenses, a cylindrical lens array and an optical waveguide, where the laser beam is incident into a curved surface of the first cylindrical lens, the optical waveguide, a curved surface of the second cylindrical lens, and the cylindrical lens array in this order.

Independent claim 43 has been amended to recite that a laser beam is shaped into linear shape through an optical system comprising first and second cylindrical lenses, a first optical waveguide and a second optical waveguide, where the first optical waveguide acts upon the linear beam spot in the direction of its major axis, where the second optical waveguide acts upon the linear beam spot in the direction of its minor axis, and where the laser beam is incident into a curved surface of the first cylindrical lens, the first optical waveguide, and a curved surface of the second cylindrical lens in this order.

The Applicant respectfully submits that Obara, Pflibsen or Okamoto does not teach, either explicitly or inherently, or suggest the above-referenced features of the present invention.

Since Obara, Pflibsen or Okamoto does not teach all the elements of the independent claims, either explicitly or inherently, an anticipation rejection cannot be maintained. Since Obara, Pflibsen or Okamoto do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. §§ 102 and 103 are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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